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Agriculture indeed has a major stake in the outcome of these water management policy discussions. Too little water, or too much water, and "We're out of business."

I would like to compliment Water Resources Council Director Gary Cobb and his staff for their comprehensive and balanced description of the nation's water problems. Their "Preliminary Water Resources Problem Statements," in effect, becomes our agenda, and it's well-done. And I'd like to thank my friend Guy Martin for offering to share this platform with me so that I can extend my greetings, and provide a summary of USDA's water related concerns and its new policy directions.

I'll do this summarizing by organizing my remarks in the following way:

I'll cite a class of problem, highlight some USDA programs that address that problem, and then spend a moment describing the Bob Bergland Department of Agriculture's perspective on those programs -- including changes in direction or emphasis now under consideration. Then perhaps we'll have a chance to interact on these proposals.

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Remarks by Dr. M. Rupert Cutler, Assistant Secretary of Agriculture for Conservation, Research & Education, at the National Conference on Water, Chase Park Plaza Hotel, St. Louis, Missouri, May 23, 1977

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Problem - Not Enough Water

Parts of our nation are experiencing the worst drought on record resulting in tremendous human impacts -- lost jobs, human suffering and real hardship.

On March 23rd, President Carter announced the administration's proposal for an emergency drought assistance program. Water conservation, he pointed out, probably is our only hope for immediate relief. The President's proposal totaled \$844 million in emergency assistance. The USDA and Interior pieces of that package have been funded and are being implemented. The EDA program is scheduled for signature by the President today.

To expedite this broad program of drought aid quickly and efficiently, the heads of four executive departments have formed a Drought Emergency Coordinating Committee. The departments include Agriculture, Interior, Commerce, and the Small Business Administration. I represent Secretary Bergland as Chairman of the Coordinating group.

This committee has established a uniform procedure for designating Emergency Drought Impact Areas. The procedure is simple. The governor of a state may request that the committee designate all or part of his state as an emergency drought impact area. If all members of the committee agree to the proposed designation, the committee Secretary (FDAA) will record it and publish it to make these areas immediately eligible for available aid from the four departments.



While water shortages in cities and towns have a more immediate impact on many people, the impact in agriculture is equally as serious and widespread. The blunt fact is, agriculture consumes more water through irrigation than all other uses -- in fact, it accounts for about 80 percent of consumptive use in the nation. So USDA must be an active participant in water management and conservation discussions.

### Policy Directions

1. Conservation has to be given more emphasis, including more efficient irrigation systems.
2. We will encourage reconversion of marginal drought vulnerable cropland to permanent pasture through cost-sharing and long-term contracts.
3. We have been looking at ways of making better use of crop insurance in concert with emergency assistance to lessen the impact of drought problems.
4. We support development of a national water policy that recognizes that emergency conditions -- such as droughts -- occur frequently and can be planned for.

### Problem - Too Much Water

On-going programs -- USDA has been an active partner in flood control and flood prevention through watershed protection for many years. We presently have almost 1,200 watershed projects approved for installation, with over 1/3 completed. This watershed program is specifically tailored to help people in a cooperative effort, with technical and financial assistance from the Soil Conservation Service and other agencies within the Departments as needed.



We presently are reviewing some 750 watershed projects to insure their safety, minimal adverse environmental impact, and economic value. In addition to this, I am reviewing the Soil Conservation Service's NEPA guidelines with the intention of developing revised procedures which will result in a more concise EIS document, yet disclose the environmental consequences of alternative action plans.

I believe that the small watershed program has great potential for meeting flood prevention needs consistent with other environmental, social, and economic goals. We are presently developing non-structural alternative plans where such an alternative appears to be a viable one. However, we must continue to emphasize the need to not develop flood plains. Past policies have not effectively solved this continuing problem.

#### Policy Directions

There will be increased emphasis on the requirement to complete land treatment measures above small watershed reservoirs.

-- All watershed projects containing channel work will be required to have an environmental impact statement prepared.

-- We will work with other Departments and the Council to revamp federal cost-sharing policies to give equal weight to environmentally sound solutions. As a biologist, I respect the aquatic ecosystem's need for a naturally fluctuating stream flow.



Problem -- Not Knowing How Much Water to Plan For

We in USDA do not have a crystal ball which tells us how much water to plan for either, but we are working on various tools that we believe have significant potential to improve water management.

USDA's Extension Service presently is working closely with NOAA's National Weather Service (NWS) to develop improved forecasting capabilities. We are testing a cooperative weather observation -- data collection effort to improve agriculturally related forecasts. The program is operational in parts of 9 states, with the Central Valley of California scheduled for implementation next month.

Weather modification efforts continue to have significant support in many states. USDA activities have been centered on Forest Service lands with mixed results. We recognize the technical and legal problems associated with this, but we need to continue to explore all potential methods of providing increased water supplies within reasonable environmental constraints.

USDA has been deeply involved in water resource management through maintaining almost 2,000 snow courses throughout the west. These are cooperative ventures with state agencies to develop necessary data for forecasting streamflow and making runoff estimates. We are taking steps to take full advantage of new technology by installing numerous recording stations and telemetry networks to make data on wind, rainfall, temperature, snowdepth, etc. available on a continuous basis. We have called this effort to streamline data gathering "snowtel." We believe there are many opportunities for this Department to expand this service and to make available our expertise to other areas of the country that do not presently have such forecasting capability.



## Policy Directions

We will place more emphasis on snow survey activities and we will work closely with NWS and others to develop a complete program which uses latest technology in weather prediction, on a long term basis. The Cooperative Extension Service is enthusiastic about recruiting volunteer weather station operators to provide local weather information to farmers and recreationists. This could also have the result of reducing pesticide use by farmers, resulting in better water quality.

### Problem - Poor Water Quality

USDA has had a water quality program for over 40 years. We haven't called it that, but the control of erosion in fact affects water quality. Silt still is the nation's major water pollutant by volume. We have learned through our research efforts that sediment often carries other harmful chemicals such as phosphorous. Salt buildup has been a major problem in some soils, and excessive runoff adds to downstream water quality problems.

USDA has been concerned about various aspects of salinity for years. The Agricultural Research Service has operated a salinity laboratory in Riverside, California to study salinity. Preliminary research studies indicate that we can reduce the "leaching fraction" by as much as three fold in some areas without salt build-up. We have field tested some of the new approaches in the Grand Valley area of Colorado with encouraging results.

A major effort has been launched toward improving irrigation efficiencies in the Wellton-Mohawk Unit in Arizona. The major objective is to improve water quality through reduced drainage effluents. This is being accomplished through better scheduling and on-farm water management.



The on-farm program in this 75,000 acre unit is expected to reduce salt contribution to the River by some 500,000 tons per year. This is a cooperative program by the Soil Conservation Service, the Agricultural Research Service and the Bureau of Reclamation.

We are also concerned about the many chemicals that enter the nation's streams as a result of farming and silviculture operations. We have been looking at opportunities to reduce use of chemicals without major impacts on production. Integrated pest management shows positive potential for additional use in many areas.

#### Policy Directions

-- We will reduce the use of chemicals on national forest lands. The Forest Service is proposing and administering many wilderness areas and wild rivers which protect water quality.

-- We will encourage integrated pest management, which emphasizes labor intensive practices and biological controls.

-- We will continue to research the use of spray irrigation of sewage effluent in forest plantations.

-- We will seek a leading role for USDA agencies in helping accomplish the objective of Sec. 208 of P.L. 92-500 to minimize non point source pollution. BMP's (best management practices) are "old hat" to the SCS which has been working on them since 1935.



Problem - Loss of Wetlands, Estuaries, Natural Rivers, and  
Associated Fish and Wildlife Habitat and Recreational Values

How we allocate our scarce resources has been of concern to some people for many years, but usually people get upset when it becomes apparent that resources - such as wetlands - are being exploited without full recognition of their unique values. The Soil Conservation Service has mapped soils and identified soil suitability and capability for many years. This information is an important ingredient in wetlands identification. We are participating cooperatively with the Fish and Wildlife Service of USDI to test a habitat evaluation system which uses sound resource data.

As you know, President Carter is to release his environmental message to the nation today. The Federal role with respect to the protection of wetlands is outlined in an executive order which accompanies that message.

USDA has been concerned about wetland policies for some time. We have not provided technical or financial assistance to farmers or ranchers for drainage of Types 3 through 20 wetlands for many years. However, we are undertaking a new initiative within USDA to take a fresh look and develop a positive approach for our programs. Last month I established a wetlands task force within our USDA Land Use Committee to make a thorough review and to develop proposals whereby we can view our wetlands for all their unique values, with full recognition of impacts on production of food and fiber. I have discussed our plans with USDI Assistant Secretary Bob Herbst. This effort will be a cooperative effort. You know there are many interest groups and concerned citizens in this subject area. Much of the past discussion has been centered on what should or should not be included in the Corps' 404 regulations. Regulation is



but one dimension of what I believe is needed to accomplish the total management of wetlands.

### Policy Directions

-- We will provide more emphasis on land use planning assistance that shows the actual tradeoffs -- ecological as well as economic.

-- Policies that do not unduly constrain the production of food and fiber on wet soils.

-- A balanced approach of compensation, incentives, easements, and regulation which recognizes unique local situations.

-- Wetlands will continue to be preserved on National Forests through a comprehensive planning process.

-- USDA shares the widespread concern regarding the need to preserve wetlands ecosystems, and we will help achieve this national objective.

### Problem - Shortage of Energy Resource

USDA fully supports efforts for energy conservation. Our primary involvement is through REA loans for rural electric cooperatives and loaning REA customers funds to insulate their FmHA financed homes. Hydro power still holds some potential for increasing energy production, and we'll protect hydro-sites on National Forest lands.

Some research is presently underway to determine the energy production of various fiber types. Our plant geneticists have not looked at fiber much as an energy source, but for other characteristics. However, plants capture



solar energy and store this energy as fiber. USDA researchers are looking at the feasibility of "energy plantations" to meet some of our future demands. The technical term is bio-mass conversion.

Some geothermal springs are located on national forest lands. These springs are being looked at as potential energy sources.

#### Policy Directions

- More emphasis on conservation of energy in all USDA programs.
- Protect hydro and geothermal sites on national forest lands.

#### Problem - High Cost of Food

Land conversion, from prime agricultural producing lands to concrete and asphalt, continues to plague our nation. We have worked closely with the Council on Environmental Quality (CEQ) to develop meaningful and workable prime farmland protection policies. USDA is concerned about taking our productive, efficient lands out of production. This results in marginal soils being brought back into production -- often with increased environmental costs. All of this tends to result in higher costs for food.

American agriculture is one of the most efficient industries in the world, but we often convert wetlands to agricultural use because it is economically efficient in the short run.

#### Policy Directions

-- In the future we will support agricultural water policies that result in continued production of food and fiber without environmental damage. We will encourage aquaculture through SCS technical assistance.



Problem - High Cost of Shelter

Many segments of our society compete for the use of our forests. Our homes come from the forests. Recreation interests enjoy forests. Forest provide habitat for many species of animals. All of these interests are part of our housing problems, in that they compete for the resource and tend to result in higher prices.

A concern in this area is Federal control or regulation. We are working closely with the Corps of Engineers to develop reasonable permit regulations under Section 404 of P.L. 92-500. Unnecessary constraints tend to further aggravate already high prices for shelter.

Policy Directions

I will work with the forest products industry, as well as the cattlemen and the soil conservation districts, to develop an appreciation among their clientele of the importance of protecting water quality through minimizing dredge-and-fill type operations. This will be done in full recognition of the need to produce food and fiber without unnecessary federal constraints.

I will touch on two more general classes of activity -- research and public involvement.

Research is the foundation on which to build new programs. New water policies must be based upon technically sound concepts. We are convinced that research efforts will need to be redirected as we continue to define and articulate our nation's new water policies. We have already started to look at areas that need added attention in USDA. In addition, we are



taking a close look at ways to better identify research objectives and manage research programs. We believe that the end result will be more responsive to resource managers' needs -- both soil and water managers will benefit. This effort is based upon my personal conviction that our research efforts provide a strong foundation upon which to build future water policies.

Finally, I will cover public involvement as an important component of USDA's unique delivery system.

The Department of Agriculture has a long history of working with farmers and ranchers -- on the ground. We have a unique delivery system for carrying out an effective water management effort through our local county Soil Conservation Service, Extension Service, Experiment Station, and Forest Service offices. These efforts are further supported by our county Farmers Home and ASCS offices. We are partners with local soil and water conservation districts and function as a team to minimize erosion and sedimentation. We are determined in USDA to maximize the effectiveness of these agencies in management and conservation of all our soil and water resources. I have been working with key people in the Extension Service to look at new and improved methods for public involvement and effective extension education efforts. These efforts can and will supplement and support our new, emerging water policies.

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